Virginia Department of Health
Electronic Lab Report Implementation Guide
HL7 version 2.5.1

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Prepared by:

Virginia Department of Health

Office of Epidemiology

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Introduction

This document presents Virginia Department of Health (VDH)-specific amplifications and constraints to the *HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm)*. It is intended to assist submitters in successfully preparing messages to transmit reportable laboratory findings to VDH and demonstrating Meaningful Use of electronic health records.

Onboarding Process for ELR in Virginia

The following are steps for ELR reporting to VDH:

Step 1. Registration: Register intent to submit ELR messages for Meaningful Use.

- Register using the VDH Meaningful Use Registration System.
- VDH will provide acknowledgement of successful registration.
- Your Meaningful Use status will be *"Registered"*.
- You are strongly encouraged to schedule a planning call with VDH. Email MeaningfulUse@vdh.virginia.gov or call (804) 864-8141.
- Prepare message content and structure according to this guide and the HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm).
- Code tests, findings and other relevant information using LOINC and SNOMED.
- Provide VDH with a list of all unique LOINC and SNOMED combinations for reportable findings from your laboratory.

Step 2. Message Structure Validation: Generate ELR messages with test data for structural validation by VDH.

- VDH will provide an invitation indicating you should begin the onboarding process. Your Meaningful Use status will be *"Invited to Onboard"* and once you begin to submit messages it will change to *"Testing and Validation"*.
- Before submitting your messages to VDH, submit sample messages through the National Institutes of Standards and Technology's (NIST) ELR conformance tool using the "context-free" validation tab. Please be aware that the NIST validator does not assure that all message requirements will be met.
- Submit sample ELR messages to VDH by e-mail for structural validation. Email sample messages as .txt attachments to MeaningfulUse@vdh.virginia.gov.
- These messages should use data from a test environment.
- Incorporate feedback from VDH to refine message structure to meet Meaningful Use and VDH message requirements.

Step 3. Connectivity: Set up transport option with ConnectVirginia.

- Select a transport method.
- Work with ConnectVirginia to establish and test transport.
- If attesting for Stage 1: VDH will provide you with acknowledgement of successful submission of test message(s) at the completion of this step.

Step 4. Message Content Validation: Submit ELR messages to VDH for content validation using the selected transport method.

- Submit messages for content validation to VDH through the selected transport method.
- Messages for content validation must use data from the production environment.
- Fax copies of the lab reports submitted to the local health department for use in validation. Fax copies to (804) 864-7970.
- Incorporate feedback from VDH to refine message content to meet Meaningful Use and VDH requirements.

Step 5. Production: Initiate ongoing submission of ELR data and participate in periodic quality assurance activities.

- Initiate regular production transmission of ELR messages to VDH.
- Your Meaningful Use status will be updated from *"Testing and Validation"* to *"In Production"*.
- Incorporate VDH feedback as necessary to ensure quality of data.
- If attesting for Stage 2: VDH will provide you with acknowledgement of ongoing data transmission for your attestation period at the completion of this step.
- Continue with current paper-based reporting to the local health department in parallel with ELR until notified that submission of paper-based reports to the local health department can be stopped.

Facilities are expected to maintain ELR transmissions to comply with state reporting requirements and to meet Meaningful Use objectives. More information on these steps is available on the VDH Meaningful Use website at http://www.vdh.virginia.gov/meaningfuluse/.

General VDH Submission Requirements
- Batch submission of ELR messages is preferred, but real time transmission of individual records is acceptable.
- Batched messages should be sent as early as possible after midnight and contain all findings from the preceding day.
- Facilities are responsible for filtering out non-reportable findings.
- Laboratories should submit a report when a reportable finding has been identified and not wait until testing on the specimen is complete.
- For any reportable hepatitis finding, all available results from the hepatitis panel should be submitted.
- Microbial sensitivity findings should be submitted for the following organisms, when available:
  - *Mycobacterium tuberculosis* complex
  - *Neisseria gonorrhea*
  - For *Staphylococcus aureus* with resistance to methicillin (MRSA), resistance to vancomycin (VRSA), or intermediate resistance to vancomycin (VISA), if the SNOMED code used indicates resistance (e.g., L-24852 for methicillin-resistant *Staphylococcus aureus*) it is not necessary to submit the sensitivity panel results. However, if the SNOMED code used does not communicate the resistance (e.g., L-24801 for *Staphyloccus aureus*) then the sensitivity results should be submitted.

Identifiers

VDH requires the use of identifiers where appropriate. Examples of expected identifiers include:

- Medical Record Number
- Specimen Accession Number
- International Standards Organization Object Identifier (OID)
- Clinical Laboratory Improvement Amendments (CLIA) number
- National Provider Identifier (NPI)

Identifiers are used in HL7 messages to uniquely identify facilities, organizations, software systems and applications, providers, patients, coded elements, and specimens. Along with the identifier, information should also be provided on the "assigning authority" to indicate what organization, software system or application assigned the identifier. This information is particularly important in indicating the facility associated with a patient medical record number or a specimen accession number.

OIDs, CLIA numbers, or NPIs are expected for the Universal Identifier, Assigning Authority ID, Assigning Facility ID, and Organization Identifier fields. For more information on OIDs and obtaining one, please visit https://hl7.org/oid/index.cfm.

Vocabulary

VDH requires the use of standard vocabulary where appropriate. Examples of expected standard vocabulary include:

- Logical Observation Identifiers Names and Codes (LOINC)
- Systemized Nomenclature of Medicine (SNOMED)
- Unified Code for Units of Measure (UCUM)

Because the reporting facility is the subject matter expert regarding its test samples and results, it is responsible for performing the mapping to these vocabularies.

The use of LOINC is required in OBX-3 (Observation Identifier) and recommended in OBR-4 (Universal Service ID). The use of SNOMED is required in OBX-5 (Observation Value) for coded lab results (CWE data types) and recommended in SPM-4 (Specimen Type). Local codes may be included in addition to standardized codes. If sending local codes, they are expected in the second triplet of the identifier field.

Data Types for Observations

Findings transmitted in OBX-5 should be sent in CWE or SN format (see page 32 for details).

Contact Information

If you have questions or need more information about ELR message submission to VDH, please contact us at MeaningfulUse@vdh.virginia.gov or (804) 864-8141.

Useful Resources

HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm) – This guide provides HL7 specifications for the ELR message. http://www.vdh.virginia.gov/meaningfuluse/documents/pdf/v251_IG_LB_LABRPTPH_R1_INFORM_2010FEB.pdf?product_id=98

Conditions Reportable by Directors of Laboratories in Virginia – Use this document for information on the findings that are required to be reported to VDH by laboratories. http://www.vdh.virginia.gov/Epidemiology/documents/pdf/RepCond_TableforLabs.pdf

Virginia Department of Health Meaningful Use website – This website provides helpful information about the onboarding process and includes a link to the VDH Meaningful Use Registration System. http://www.vdh.virginia.gov/meaningfuluse/

Message Segments, Structure, and Formatting

The section below is meant to aid in the construction of an ELR message. The table lists the expected segments of an HL7 ELR message submitted to VDH and indicates whether they are required (R) or optional (O).

HL7 ELR Message Segments		
Segment	**Use**	**Description**
Message Header (MSH)	R	The message header (MSH) segment contains information describing how to parse and process the message. It includes identification of message delimiters, sender, receiver, message type and a timestamp.
Software Segment (SFT)	R	Each application that touches the message on the way to the destination application must add a SFT segment for its application. The first repeat (i.e., the Laboratory Result Sender actor) is required. Any other application that transforms the message must add an SFT segment for that application. Other applications that route or act as a conduit may add an SFT but are not required to do so.
Patient Identification (PID)	R	The patient identification (PID) segment provides important identification information about the patient and is used as the primary means of communicating the identifying and demographic information about a patient.
Patient Notes and Comments (NTE)	O	This NTE segment may be used for notes or comments pertaining to the patient identified in the PID segment. It should not contain order or result related comments.
Next of Kin (NK1)	O	Please use the next of kin (NK1) segment for parent/guardian information, if it is available, when reporting testing results for children.
Common Order (ORC)	R	The common order (ORC) segment contains basic information about the order for testing of the specimen. This segment includes identifiers for the order, who placed the order, when it was placed and what action to take regarding the order.

Observation Request (OBR)	R	The observation request (OBR) segment is used to capture information about a single test performed on the specimen. Most importantly, the OBR identifies the type of test performed on the specimen, and relates that information to the order for the testing.
Observation Request Notes and Comments (NTE)	O	The OBR NTE segment is generally not expected in ELR submissions to VDH.
Observation/Result (OBX)	R	For laboratory testing, the observation/result (OBX) segment normally reports the results of a test performed on a specimen. Each OBX segment contains information regarding a single observation result including the test type, result, and time.
Observation/Result Notes and Comments (NTE)	O	This NTE segment may be used for notes or comments pertaining to the result being reported in the OBX segment.
Specimen (SPM)	R	The specimen information (SPM) segment describes the characteristics of a single sample. It contains information regarding the type of specimen, where and how it was collected, who collected it, and some basic characteristics of the specimen.

Usage (Use) codes for the HL7 ELR message segments tables:

C	Conditional
CE	Conditional, but may be empty
O	Optional
R	Required to be sent
RE	Required to be sent but can be empty if information is not available

The table below lists the data types included in the VDH ELR specifications.

Data Type (DT) Codes Used for Data Elements in Message Segment Tables	
Code	**Text Description**
CE	Coded Element
CQ	Composite Quantity with Units
CWE	Coded with Exceptions
CX	Extended Composite ID with Check Digit
DR	Date/Time Range
DTM	Date/Time
EI	Entity Identifier
EIP	Entity Identifier Pair
FN	Family Name
FT	Formatted Text Data
HD	Hierarchic Designator
ID	Coded Values for HL7 Tables
IS	Coded Values for User-Defined Tables
SN	Structured Numeric
MSG	Message Type
NM	Numeric
PL	Person Location

PRL	Parent Result Link
PT	Processing Time
SAD	Street Address
SI	Sequence ID
ST	String
TS	Time Stamp
TX	Text Data
VID	Version Identifier
XAD	Extended Address
XCN	Extended Composite ID Number and Name
XON	Extended Composite Name and ID Number for Organizations
XPN	Extended Person Name
XTN	Extended Telecommunications Number

Data Element Specifications

The tables below outline the data elements, by message segment, that are requested for electronic lab report submission.

Field Name	Seq	DT	Length	Use	Notes/Value Set
MESSAGE HEADER SEGMENT (MSH) The message header (MSH) segment contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, and timestamp.					
Field Separator	MSH-1	ST	1	R	Literal value "|".
Encoding Characters	MSH-2	ST	5	R	Literal values "^~\&#" *OR* "^~\&".
Sending Application	MSH-3	HD	227	RE	Used to identify the sending application.
Namespace ID	MSH-3.1	IS	20	RE	Name of the sending application. Please discuss format of name and any abbreviations with VDH.
Universal ID	MSH-3.2	ST	199	RE	An OID for the sending application is expected. If the sending application does not have a standards-based ID, please discuss the use of an alternate ID with VDH.
Universal ID Type	MSH-3.3	ID	6	RE	Expecting "ISO" if an OID was used in MSH-3.2 or "ID" if an alternate identifier was used.
Sending Facility	MSH-4	HD	27	R	Used to identify the sending facility.
Namespace ID	MSH-4.1	IS	20	R	Name of the sending facility. Please discuss format of name and any abbreviations with VDH.
Universal ID	MSH-4.2	ST	199	R	The sending facility's CLIA number, NPI, or OID is expected. If the sending facility does not have a standards-based ID, please discuss the use of an alternate ID with VDH.
Universal ID Type	MSH-4.3	ID	6	R	Expecting "CLIA" if a CLIA number was used in MSH-4.2, "NPI" if an NPI was used, "ISO" if an OID was used, or "ID" if an alternate identifier was used.
Receiving Application	MSH-5	HD	227	RE	Used to identify the receiving application.
Namespace ID	MSH-5.1	IS	20	R	Literal value: "VDHELR".
Universal ID	MSH-5.2	ST	199	R	Literal value: "2.16.840.1.113883.3.3556.6.1".

Universal ID Type	MSH-5.3	ID	6	R	Literal value: "ISO".
Receiving Facility	MSH-6	HD	227	R	Used to identify the receiving facility.
Namespace ID	MSH-6.1	IS	20	R	Literal value: "VDH".
Universal ID	MSH-6.2	ST	199	R	Literal value: "2.16.840.1.113883.3.3556".
Universal ID Type	MSH-6.3	ID	6	R	Literal value: "ISO".
Date/Time of Message	MSH-7	TS	26	R	Date/Time the sending system created the message. Format: *YYYYMMDD[HHMM[SS]]*
Message Type	MSH-9	MSG	15	R	Defines the type of HL7 message being sent. Literal value: "ORU^R01^ORU_R01".
Message Code	MSH-9.1	ID	3	R	Literal value: "ORU".
Trigger Event	MSH-9.2	ID	3	R	Literal value: "R01".
Message Structure	MSH-9.3	ID	7	R	Literal value: "ORU_R01".
Message Control ID	MSH-10	ST	199	R	A number or other identifier that uniquely identifies the message. The recommended format for this field is a timestamp and a sequence number.
Processing ID	MSH-11	PT	3	R	Indicates the intent for processing the message. Literal values: "D" for Debugging or "P" for Production.
Version ID	MSH-12	VID	5	R	Literal value: "2.5.1" (Note that Meaningful Use requires use of an HL7 v 2.5.1 message).
Accept Acknowledgement Type	MSH-15	ID	2	RE	Indicates if/when sender wants to receive an acknowledgement that the message was received by VDH. VDH will send an acknowledgement. Expecting "AL" (Always). Other valid values are Table HL70155 – Acknowledgement Type.
Application Acknowledgement Type	MSH-16	ID	2	RE	Indicates if/when sender wants to receive an acknowledgement that the message was received by the target application at VDH. VDH does not send application-level acknowledgements. Expecting "NE" (Never). Other valid values are Table HL70155 – Acknowledgement Type.
Message Profile Identifier	MSH-21	EI	427	R	Indicates adherence to a message profile. Message profiles contain detailed explanations of grammar, syntax, and usage for a particular message or set of messages.
Entity Identifier	MSH-21.1	ST	199	R	Expecting "PHLabReport-NoAck" (No Acknowledgement Requested).

Namespace ID	MSH-21.2	IS	20	RE	Literal value: "HL7".
Universal ID	MSH-21.3	ST	199	R	Literal value: "2.16.840.1.113883.9.11".
Universal ID Type	MSH-21.4	ID	6	R	Literal value: "ISO".

SOFTWARE SEGMENT (SFT)
The software segment (SFT) provides information about the sending application or other applications that manipulate the message before it reaches the receiving application for processing.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Software Vendor Organization	SFT-1	XON	50	R	Used to identify the software vendor for the laboratory information system.
Organization Name	SFT-1.1	ST	4	CE	Name of the software vendor. Please discuss format of name and any abbreviations with VDH.
Organization Name Type Code	SFT-1.2	IS	20	RE	Defines the type of name in SFT-1.1. Use a valid type code value. If blank, legal name is assumed. Valid values include (excerpt of Table HL70204): <table><tr><td>**Value**</td><td>**Description**</td></tr><tr><td>D</td><td>Display name</td></tr><tr><td>L</td><td>Legal name</td></tr></table>
Software Certified Version or Release Number	SFT-2	ST	15	R	Latest software version number of the sending system.
Software Product Name	SFT-3	ST	20	R	The name of the software that submitted the message.
Software Binary ID	SFT-4	ST	20	R	Expecting the software binary ID for the software that created the message. Please consult with your software vendor for this information. If the binary ID is not available, repeat the software version number from SFT-2.
Software Install Date	SFT-6	TS	26	RE	Date/Time the submitting software was installed at the sending facility. Format: *YYYYMMDD[HHMM[SS]]*

<table>
<tr><td colspan="6">PATIENT IDENTIFICATION SEGMENT (PID)
The patient identification (PID) segment contains basic information regarding the patient.
This information includes patient name, date of birth, race and phone number.</td></tr>
<tr><td>Field Name</td><td>Seq</td><td>DT</td><td>Length</td><td>Use</td><td>Notes/Value Set</td></tr>
<tr><td>Set ID – PID</td><td>PID-1</td><td>SI</td><td>4</td><td>R</td><td>Literal value: "1".</td></tr>
<tr><td>Patient Identifier List</td><td>PID-3</td><td>CX</td><td>250</td><td>R</td><td>PID-3 is a repeating field that can accommodate multiple patient identifiers. Generally, this field will provide a unique patient identifier assigned by the facility or application submitting the report to public health.</td></tr>
<tr><td>Patient ID</td><td>PID-3.1</td><td>ST</td><td>15</td><td>R</td><td>VDH prefers that the first patient ID provided always be a laboratory assigned patient identifier or a patient medical record number. The identifier provided should allow the reporting or ordering facility to retrieve information on the patient when requested by public health.</td></tr>
<tr><td>Assigning Authority</td><td>PID-3.4</td><td>HD</td><td>227</td><td>R</td><td>Identifies the system, application, or organization that assigned the patient ID in PID-3.1.</td></tr>
<tr><td>Assigning Authority Name</td><td>PID-3.4.1</td><td>IS</td><td>20</td><td>RE</td><td>The name of the assigning authority that assigned the patient ID.</td></tr>
<tr><td>Assigning Authority ID</td><td>PID-3.4.2</td><td>ST</td><td>199</td><td>R</td><td>The CLIA number, NPI, OID or other ID for the assigning authority.</td></tr>
<tr><td>Assigning Authority ID Type</td><td>PID-3.4.3</td><td>ID</td><td>6</td><td>R</td><td>Expecting "CLIA" if a CLIA number is used in PID-3.4.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.</td></tr>
<tr><td>Identifier Type Code</td><td>PID-3.5</td><td>ID</td><td>5</td><td>R</td><td>Defines the type of patient ID in PID-3.1.

Valid values include (excerpt of Table HL70203):
<table><tr><td>Value</td><td>Description</td></tr><tr><td>AN</td><td>Account Number</td></tr><tr><td>BR</td><td>Birth Registry Number</td></tr><tr><td>DL</td><td>Driver's License Number</td></tr><tr><td>MR</td><td>Medical Record Number</td></tr><tr><td>PI</td><td>Patient Internal Identifier</td></tr><tr><td>PN</td><td>Person Number</td></tr><tr><td>PT</td><td>Patient External Identifier</td></tr><tr><td>SS</td><td>Social Security Number</td></tr></table></td></tr>
<tr><td>Assigning Facility</td><td>PID-3.6</td><td>HD</td><td>227</td><td>R</td><td>Identifies the facility that assigned the patient ID in PID-3.1.</td></tr>
<tr><td>Assigning Facility Name</td><td>PID-3.6.1</td><td>IS</td><td>20</td><td>RE</td><td>The name of the facility that assigned the patient ID.</td></tr>
</table>

Assigning Facility ID	PID-3.6.2	ST	199	R	The CLIA number, NPI, OID, or other ID for the assigning facility.
Assigning Facility ID Type	PID-3.6.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in PID-3.6.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Patient Name	PID-5	XPN	294	R	The complete name of the patient.
Last Name	PID-5.1	FN	Not Limited	R	The patient's family/surname.
First Name	PID-5.2	ST	Not Limited	R	The patient's given name.
Middle Name/Initials	PID-5.3	ST	Not Limited	RE	The patient's middle initial or middle name.
Suffix	PID-5.4	ST	Not Limited	RE	The patient's suffix (e.g., JR or III).
Prefix	PID-5.5	ST	Not Limited	RE	The patient's prefix (e.g., DR).
Name Type Code	PID-5.7	ID	Not Limited	RE	Defines the type of name in PID-5. Use of legal name ("L") is expected. If blank, legal name is assumed. Valid values include (excerpt of Table HL70200):
Mother's Maiden Name	PID-6	XPN	250	RE	The patient's mother's maiden name. VDH generally does not expect this information.
Last Name	PID-6.1	FN	Not Limited	RE	The patient's mother's family/surname.
First Name	PID-6.2	ST	Not Limited	RE	The patient's mother's given name.
Middle Name/Initials	PID-6.3	ST	Not Limited	RE	The patient's mother's middle initial or middle name.
Suffix	PID-6.4	ST	Not Limited	RE	The patient's mother's suffix (e.g., JR or III).

Name Type Code valid values:

Value	Description
C	Adopted Name
A	Alias Name
S	Coded Pseudo-Name to ensure anonymity
T	Indigenous/Tribal/Community Name
L	Legal Name
M	Maiden Name
N	Nickname

Prefix	PID-6.5	ST	Not Limited	RE	The patient's mother's prefix (e.g., DR).
Name Type Code	PID-6.7	ID	Not Limited	RE	Defines the type of name in PID-6. Literal value: "M" (Maiden Name) from Table HL70200 – Name Type is required.
Date/Time of Birth	PID-7	TS	26	RE	The patient's date of birth. Format: *YYYYMMDD*
Administrative Sex	PID-8	IS	1	RE	Defines the patient's gender. Valid values are (Table HL70001):<table><tr><td>**Value**</td><td>**Description**</td></tr><tr><td>A</td><td>Ambiguous</td></tr><tr><td>F</td><td>Female</td></tr><tr><td>M</td><td>Male</td></tr><tr><td>N</td><td>Not Applicable</td></tr><tr><td>O</td><td>Other</td></tr><tr><td>U</td><td>Unknown</td></tr></table>
Race	PID-10	CWE	478	RE	Race should be submitted if known. Patient may have more than one race defined.
Identifier	PID-10.1	ST	20	RE	Defines the patient's race category. Valid values are (Table HL70005):<table><tr><td>**Value**</td><td>**Description**</td></tr><tr><td>1002-5</td><td>American Indian or Alaska Native</td></tr><tr><td>2028-9</td><td>Asian</td></tr><tr><td>2054-5</td><td>Black or African-American</td></tr><tr><td>2076-8</td><td>Native Hawaiian or Other Pacific Islander</td></tr><tr><td>2131-1</td><td>Other Race</td></tr><tr><td>2106-3</td><td>White</td></tr></table>
Text	PID-10.2	ST	199	CE	The standardized text description that corresponds with the race code in PID-10.1.
Name of Coding System	PID-10.3	ID	20	CE	Literal value: "HL70005". This indicates the coding system used for race in PID-10.1.
Patient Address	PID-11	XAD	513	RE	Whenever possible, provide the address for the patient's primary residence rather than the billing address.
Street Address Line 1	PID-11.1	ST	100	RE	The patient's street address (e.g., "123 Main St.").
Street Address Line 2	PID-11.2	ST	100	RE	Use for further street address information.

City	PID-11.3	ST	50	RE	The city from the patient's address.
State	PID-11.4	ST	50	RE	The state from the patient's address. Use a valid 2 character state code.
ZIP or Postal Code	PID-11.5	ST	12	RE	The zip code from the patient's address. Use a valid 5-digit zip code.
Address Type	PID-11.7	ID	3	RE	Defines the type of address in PID-11. Type code "H" (Home) from Table HL70190 – Address Type is expected. If residential address is provided, use type code "H" (Home). If patient address is submitted, this field is required. Valid values include (excerpt of Table HL70190): | Value	Description
---	---
B	Firm/Business
C	Current or Temporary
H	Home
L	Legal Address
M	Mailing
O	Office
P	Permanent
RH	Registry home	
County Code	PID-11.9	IS	20	RE	Submit the FIPS code for the county where the patient resides, if the information is available. If address is in an independent city in Virginia, submit the city FIPS code. Use the two digit VA state code ("51") followed by the three digit county/city-specific code.
Phone Number - Home	PID-13	XTN	40	RE	Whenever possible, provide the patient's primary telephone number.

Telecom Use Code	PID-13.2	ID	Not Limited	RE	Defines the type of phone number in PID-13. VDH prefers to receive the primary residence number ("PRN"). Valid values are (Table HL70201): <table><tr><th>Value</th><th>Description</th></tr><tr><td>ASN</td><td>Answering Service Number</td></tr><tr><td>BPN</td><td>Beeper Number</td></tr><tr><td>EMR</td><td>Emergency Number</td></tr><tr><td>NET</td><td>Network (email) Address</td></tr><tr><td>ORN</td><td>Other Residence Number</td></tr><tr><td>PRN</td><td>Primary Residence Number</td></tr><tr><td>VHN</td><td>Vacation Home Number</td></tr><tr><td>WPN</td><td>Work Number</td></tr></table>
Telecom Equipment Type	PID-13.3	ID	Not Limited	RE	Defines the type of technology/equipment for the phone number in PID-13. VDH prefers to receive the value for telephone ("PH") or cellular phone ("CP"). Valid values are (Table HL70202): <table><tr><th>Value</th><th>Description</th></tr><tr><td>BP</td><td>Beeper</td></tr><tr><td>CP</td><td>Cellular Phone</td></tr><tr><td>FX</td><td>Fax</td></tr><tr><td>Internet</td><td>Internet Address: Use Only If Telecommunication Use Code Is NET</td></tr><tr><td>MD</td><td>Modem</td></tr><tr><td>PH</td><td>Telephone</td></tr><tr><td>TDD</td><td>Telecommunications Device for the Deaf</td></tr><tr><td>TTY</td><td>Teletypewriter</td></tr><tr><td>X.400</td><td>X.400 email address: Use Only If Telecommunication Use Code Is NET</td></tr></table>
Area Code	PID-13.6	NM	3	CE	The area code of the patient's home telephone number.
Phone Number	PID-13.7	NM	7	CE	The patient's local home telephone number.
Extension	PID-13.8	NM	Not Limited	CE	The patient's home telephone extension.
Phone Number – Business	PID-14	XTN	40	RE	The patient's work telephone number, if available.

					Defines the type of phone number in PID-14. VDH prefers to receive the work number ("WPN"). Valid values are (Table HL70201):
Telecom Use Code	PID-14.2	ID	Not Limited	RE	<table><tr><th>Value</th><th>Description</th></tr><tr><td>ASN</td><td>Answering Service Number</td></tr><tr><td>BPN</td><td>Beeper Number</td></tr><tr><td>EMR</td><td>Emergency Number</td></tr><tr><td>NET</td><td>Network (email) Address</td></tr><tr><td>ORN</td><td>Other Residence Number</td></tr><tr><td>PRN</td><td>Primary Residence Number</td></tr><tr><td>VHN</td><td>Vacation Home Number</td></tr><tr><td>WPN</td><td>Work Number</td></tr></table>
Telecom Equipment Type	PID-14.3	ID	Not Limited	RE	Defines the type of technology/equipment for the phone number in PID-14. VDH prefers to receive the value for telephone ("PH") or cellular phone ("CP"). Valid values are (Table HL70202): <table><tr><th>Values</th><th>Description</th></tr><tr><td>BP</td><td>Beeper</td></tr><tr><td>CP</td><td>Cellular Phone</td></tr><tr><td>FX</td><td>Fax</td></tr><tr><td>Internet</td><td>Internet Address: Use Only If Telecommunication Use Code Is NET</td></tr><tr><td>MD</td><td>Modem</td></tr><tr><td>PH</td><td>Telephone</td></tr><tr><td>TDD</td><td>Telecommunications Device for the Deaf</td></tr><tr><td>TTY</td><td>Teletypewriter</td></tr><tr><td>X.400</td><td>X.400 email address: Use Only If Telecommunication Use Code Is NET</td></tr></table>
Area Code	PID-14.6	NM	3	CE	The area code of the patient's work telephone number.
Phone Number	PID-14.7	NM	7	CE	The patient's local work telephone number.
Extension	PID-14.8	NM	Not Limited	CE	The patient's work telephone extension.
Ethnic Group	PID-22	CWE	478	RE	The patient's ethnicity should be submitted if available.

					Defines the patient's ethnic category.
Identifier	PID-22.1	ST	20	RE	Valid values are (Table HL70189):

					Defines the patient's ethnic category. Valid values are (Table HL70189):
Identifier	PID-22.1	ST	20	RE	**Value** | **Description** H | Hispanic or Latino N | Not Hispanic or Latino U | Unknown
Text	PID-22.2	ST	199	CE	The standardized text description that corresponds with the patient ethnicity code in PID-22.1.
Name of Coding System	PID-22.3	ID	20	CE	This indicates the coding system used for ethnicity in PID-22.1. Literal value: "HL70189".
Patient Death Date and Time	PID-29	TS	26	RE	The date and time of the patient's death. Format: *YYYYMMDD[HHMM[SS]]*
Patient Death Indicator	PID-30	ID	1	RE	Expecting: "Y" if PID-29 is populated.

PID NTE – Use for Pregnancy Status Reporting Pregnancy status is epidemiologically important information and should be provided when available.					
Field Name	**Seq**	**DT**	**Length**	**Use**	**Notes/Value Set**
Set ID – NTE	NTE-1	SI	4	R	For the first NTE segment, the Set ID shall be "1", for a second NTE segment, the Set ID shall be "2", etc. Subsequent NTE segments under the same parent segment should increment the Set ID field.
Source of Comment	NTE-2	ID	8	RE	Expecting value "P" if orderer/placer is source of comment or "L" if lab/filler department is source of comment. Values are from Table HL70105 – Source of Comment.
Comment	NTE-3	FT	65536	R	^Status (SNOMED codes: *261665006^Unknown*, *7738600^Patient currently pregnant*, or *60001007^Not pregnant*).
Comment Type	NTE-4	CE	60	RE	Expecting: "RE^Pregnancy status^HL70364". Value is from Table HL70364 – Comment Type.

<table>
<tr><td colspan="6">NEXT OF KIN SEGMENT (NK1)
This segment is not expected unless relevant to the subject of the message.
This information is of particular value to public health when the patient is a minor or in custodial care.</td></tr>
</table>

Field Name	Seq	DT	Length	Use	Notes/Value Set
Set ID – NK1	NK1-1	SI	4	R	For the first NK1 segment, the Set ID shall be "1", for a second NK1 segment, the Set ID shall be "2", etc. Subsequent NK1 segments should increment the Set ID field.
Next of Kin Name	NK1-2	XPN	250	RE	The complete name of the next of kin. If the patient is a child, please provide information in these fields on the parent or guardian, if it is available.
Last Name	NK1-2.1	FN	50	RE	The next of kin/contact's family/surname.
First Name	NK1-2.2	ST	30	RE	The next of kin/contact's given name.
Middle Name/Initials	NK1-2.3	ST	30	RE	The next of kin/contact's middle initial or middle name.
Suffix	NK1-2.4	ST	20	RE	The next of kin/contact's suffix (e.g., JR or III).
Prefix	NK1-2.5	ST	20	RE	The next of kin/contact's prefix (e.g., DR).
Name Type Code	NK1-2.7	ID	1	RE	Defines the type of name sent in NK1-2. Use of legal name ("L") is expected. If blank, legal name is assumed.
Next of Kin Relationship	NK1-3	CWE	60	RE	The relationship of the next of kin/contact to the patient.
Next of Kin Relationship Code	NK1-3.1	ST	20	RE	Defines the relationship between the next of kin/contact and the patient. Valid values include (excerpt of Table HL70063):

Valid values include (excerpt of Table HL70063):

Value	Description
BRO	Brother
CGV	Care giver
CHD	Child
EMC	Emergency contact
FTH	Father
GCH	Grandchild
GRD	Guardian
GRP	Grandparent
MTH	Mother
SCH	Stepchild
SIB	Sibling
SIS	Sister
SPO	Spouse
WRD	Ward of court

Next of Kin Address	NK1-4	XAD	106	RE	Whenever possible, provide the address for the next of kin/contact's primary residence rather than the billing address.
Street Address Line 1	NK1-4.1	SAD	184	RE	The next of kin/contact's street address (e.g., "123 Main St.").
Street Address Line 2	NK1-4.2	ST	120	RE	Use for further street address information.
City	NK1-4.3	ST	50	RE	The city from the next of kin/contact's address.
State	NK1-4.4	ST	50	RE	The state from the next of kin/contact's address. Use a valid 2 character state code.
Zip or Postal Code	NK1-4.5	ST	12	RE	The zip code from the next of kin/contact's address. Use a valid 5-digit zip code.
Address Type	NK1-4.7	ID	3	RE	Defines the type of address in NK1-4. If residential address is provided, use type code "H" (Home). If mailing address is used, use type code "M" (Mailing). If next of kin/contact's address is submitted, this field is required.
County Code	NK1-4.9	IS	20	RE	Submit the FIPS code for the county where the next of kin/contact resides, if the information is available. If address is in an independent city in Virginia, submit the city FIPS code. Use the two digit VA state code ("51") followed by the three digit county/city-specific code.
Phone Number	NK1-5	XTN	40	RE	Whenever possible, provide the next of kin/contact's home telephone number.
Telecom Use Code	NK1-5.2	ID	3	RE	Defines the type of phone number provided in NK1-5. VDH prefers to receive the primary residence number ("PRN"). Valid values are (Table_HL70201): <table><tr><th>Value</th><th>Description</th></tr><tr><td>ASN</td><td>Answering Service Number</td></tr><tr><td>BPN</td><td>Beeper Number</td></tr><tr><td>EMR</td><td>Emergency Number</td></tr><tr><td>NET</td><td>Network (email) Address</td></tr><tr><td>ORN</td><td>Other Residence Number</td></tr><tr><td>PRN</td><td>Primary Residence Number</td></tr><tr><td>VHN</td><td>Vacation Home Number</td></tr><tr><td>WPN</td><td>Work Number</td></tr></table>

					Defines the type of technology/equipment for the phone number in NK1-5. VDH prefers to receive the value for telephone ("PH") or cellular phone ("CP"). Valid values are (Table HL70202):
Telecom Equipment Type	NK1-5.3	ID	8	RE	<table><tr><td>**Value**</td><td>**Description**</td></tr><tr><td>BP</td><td>Beeper</td></tr><tr><td>CP</td><td>Cellular Phone</td></tr><tr><td>FX</td><td>Fax</td></tr><tr><td>Internet</td><td>Internet Address: Use Only If Telecommunication Use Code is NET</td></tr><tr><td>MD</td><td>Modem</td></tr><tr><td>PH</td><td>Telephone</td></tr><tr><td>TDD</td><td>Telecommunications Device for the Deaf</td></tr><tr><td>TTY</td><td>Teletypewriter</td></tr><tr><td>X.400</td><td>X.400 email address: Use Only If Telecommunication Use Code Is NET</td></tr></table>
Area Code	NK1-5.6	NM	3	RE	The area code of the next of kin/contact's phone number.
Phone Number	NK1-5.7	NM	9	RE	The next of kin/contact's local telephone number.
Extension	NK1-5.8	NM	5	RE	The next of kin/contact's telephone extension.
Additional Notes Text	NK1-5.9	ST	199	RE	
Contact Person's Name	NK1-30	XPN	48	RE	The name of the contact person at the organization named in NK1-13.
Contact Person's Telephone Number	NK1-31	XTN	40	RE	Phone number of the contact person for the responsible organization.
Contact Person's Address	NK1-32	XAD	106	RE	The address of the contact person at the organization named in NK1-13.

Field Name	Seq	DT	Length	Use	Notes/Value Set
COMMON ORDER SEGMENT (ORC) The common order (ORC) segment provides basic information about the ordered test (e.g., identifiers for the order, who placed the order, when it was placed, etc.).					
Order Control	ORC-1	ID	2	R	Determines the function of the order segment. Literal value: "RE".
Placer Order Number	ORC-2	EI	22	CE	The order number of the entity that placed the order. If ORC-2 (Placer Order Number) is populated then this field must contain the same value as OBR-2.
Order Number	ORC-2.1	ST	199	R	The placer order number is expected to be unique within the placer's organization. If order numbers are ever reused, a date-stamp may need to be added to the end of the number to guarantee uniqueness.
Assigning Authority Name	ORC-2.2	IS	20	RE	The name of the assigning authority that assigned the placer order number.
Assigning Authority ID	ORC-2.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	ORC-2.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-2.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Filler Order Number	ORC-3	EI	22	R	The order number of the entity that carries out the order. This field should contain the same value as OBR-3.
Order Number	ORC-3.1	ST	199	R	The filler order number is expected to be unique within the filler's organization. If order numbers are ever reused, a date stamp may need to be added to the end of the number to guarantee uniqueness.
Assigning Authority Name	ORC-3.2	IS	20	RE	The name of the assigning authority that assigned the filler order number.
Assigning Authority ID	ORC-3.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	ORC-3.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-3.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Placer Group Number	ORC-4	CE	22	RE	Used to identify a group of orders. In a laboratory setting, this is commonly referred to as a "requisition number".
Order Number	ORC-4.1	ST	199	R	The placer group order number is expected to be unique within the placer's organization. If order numbers are ever reused, a date stamp may need to be added to the end of the number to guarantee uniqueness.
Assigning Authority Name	ORC-4.2	IS	20	RE	The name of the assigning authority that assigned the placer group order number.

Assigning Authority ID	ORC-4.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	ORC-4.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-4.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Ordering Provider	ORC-12	XCN	120	CE	This field identifies the provider who ordered the test. If OBR-16 is populated, this field will contain the same values.
ID Number	ORC-12.1	ST	Not Limited	RE	The ordering provider's ID number. The National Provider Identifier (NPI) is recommended.
Last Name	ORC-12.2	FN	Not Limited	RE	The ordering provider's family/surname.
First Name	ORC-12.3	ST	Not Limited	RE	The ordering provider's given name.
Middle Name/Initials	ORC-12.4	ST	Not Limited	RE	The ordering provider's middle initial or middle name.
Suffix	ORC-12.5	ST	Not Limited	RE	The ordering provider's suffix (e.g., JR or III).
Prefix	ORC-12.6	ST	Not Limited	RE	The ordering provider's prefix (e.g., DR).
Assigning Authority	ORC-12.9	HD	227	CE	Identifies the system, application, or organization that assigned the ordering provider ID in ORC-12.1.
Assigning Authority Name	ORC-12.9.1	IS	20	RE	Expecting "CMS" if an NPI is used in ORC-12.1. If another type of identifier is used in ORC-12.1, expecting the name of the assigning authority for this identifier.
Assigning Authority ID	ORC-12.9.2	ST	199	R	Expecting the CMS OID "2.16.840.1.113883.19.4.6" if an NPI is used in ORC-12.1. If another identifier is used in ORC-12.1, expecting the CLIA number, NPI, OID, or other ID for the assigning authority.
Assigning Authority ID Type	ORC-12.9.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-12.9.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Name Type Code	ORC-12.10	ID	1	RE	Defines the type of name in ORC-12. Use of legal name ("L") is expected by VDH. If blank, legal name is assumed. See Table HL70200 – Name Type for other valid values.
Identifier Type Code	ORC-12.13	IS	Not Limited	CE	Component identifies the type of ID in ORC-12.1. Expecting "NPI" (if an NPI is used in ORC-12.1). See Table HL70203 – Identifier Type Code for other valid values.

Assigning Facility	ORC-12.14	HD	227	RE	Identifies the facility that assigned the ordering provider ID in ORC-12.1. Note that if an NPI is used in ORC-12.1, there is no assigning facility and this field will be empty.
Assigning Facility Name	ORC-12.14.1	IS	20	RE	The name of the facility that assigned the ordering provider ID. This field will be empty if an NPI is used in ORC-12.1.
Assigning Facility ID	ORC-12.14.2	ST	199	R	The CLIA number, NPI, OID, or other ID for the assigning facility. This field will be empty if an NPI is used in ORC-12.1.
Assigning Facility ID Type	ORC-12.14.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-12.14.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Ordering Facility Name	ORC-21	XON	60	R	This field identifies the facility that ordered the test.
Facility Name	ORC-21.1		Not Limited	CE	The name of the facility that ordered the test.
Facility Name Type Code	ORC-21.2		Not Limited	RE	Defines the type of name in ORC-21.1. Use of legal name ("L") is expected by VDH. If blank, legal name is assumed. See Table HL70204 – Organizational Name Type for other valid values.
Assigning Authority	ORC-21.6	HD	227	CE	Identifies the system, application, or organization that assigned the ordering facility ID in ORC-21.10.
Assigning Authority Name	ORC-21.6.1	IS	20	RE	The name of the assigning authority that assigned the facility ID in ORC-21.10.
Assigning Authority ID	ORC-21.6.2	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	ORC-21.6.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-21.6.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Identifier Type Code	ORC-21.7		Not Limited	CE	Expecting "XX" when ORC-21.10 is populated with the ordering facility identifier.
Organization Identifier	ORC-21.10		Not Limited	RE	The ordering facility identifier. A CLIA number, OID, or other ID is expected.
Ordering Facility Address	ORC-22	XAD	106	R	This field identifies the ordering facility address.
Street Address Line 1	ORC-22.1	ST	100	RE	The ordering facility's street/mailing address (e.g., "123 Main St.").
Street Address Line 2	ORC-22.2	ST	100	RE	Use for further street address information.
City	ORC-22.3	ST	50	RE	The city in which the ordering facility is located.

State	ORC-22.4	ST	50	RE	The state in which the ordering facility is located. Use a valid 2 character state code.
ZIP or Postal Code	ORC-22.5	ST	12	RE	The zip code of the ordering facility's address. Use a valid 5-digit zip code.
Address Type	ORC-22.7	ID	3	RE	Defines the type of address in ORC-22. Type code "B" (Business) from Table HL70190 – Address Type is expected. If ordering facility's address is submitted, this field is required.
County Code	ORC-22.9	IS	20	RE	Submit the FIPS code for the ordering facility address. If address is in an independent city in Virginia, submit the city FIPS code. Use the two digit VA state code ("51") followed by the three digit county/city-specific code.
Ordering Facility Phone Number	ORC-23	XTN	48	R	The ordering facility's phone number.
Telecom Use Code	ORC-23.2	ID	Not Limited	RE	Defines the type of phone number in ORC-23. VDH prefers to receive the work number ("WPN"). See Table HL70201 – Telecommunication Use Code for other valid values.
Telecom Equipment Type	ORC-23.3	ID	Not Limited	RE	Defines the type of technology/equipment for the phone number in ORC-23. VDH prefers to receive the telephone ("PH"). See Table HL70202 – Telecommunication Equipment Type for other valid values.
Area Code	ORC-23.6	NM	3	CE	The area code of the ordering facility's telephone number.
Phone Number	ORC-23.7	NM	7	CE	The ordering facility's local telephone number.
Extension	ORC-23.8	NM	Not Limited	CE	The ordering facility's telephone extension.
Ordering Provider Address	ORC-24	XAD	106	RE	This field identifies the ordering provider address.
Street Address Line 1	ORC-24.1	ST	100	RE	The ordering provider's street address (e.g., "123 Main St.").
Street Address Line 2	ORC-24.2	ST	100	RE	Use for further street address information.
City	ORC-24.3	ST	50	RE	The city in which the ordering provider is located.
State	ORC-24.4	ST	50	RE	The state in which the ordering provider is located. Use a valid 2 character state code.
ZIP or Postal Code	ORC-24.5	ST	12	RE	The zip code of the ordering provider's address. Use a valid 5-digit zip code.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Address Type	ORC-24.7	ID	3	RE	Defines the type of address in ORC-24. Type code "B" (Business) from Table HL70190 – Address Type is expected. If ordering provider address is submitted, this field is required.
County Code	ORC-24.9	IS	20	RE	Submit the FIPS code for the ordering provider address. If address is in an independent city in Virginia, submit the city FIPS code. Use the two digit VA state code ("51") followed by the three digit county/city-specific code.

OBSERVATION REQUEST SEGMENT (OBR)					
The observation request (OBR) segment provides information about the type of test performed and relates the information to the order for the test. A separate OBR is needed for each test ordered.					
Field Name	**Seq**	**DT**	**Length**	**Use**	**Notes/Value Set**
Set ID - OBR	OBR-1	SI	1	R	For the first OBR segment, the Set ID shall be "1", for a second OBR segment, the Set ID shall be "2", etc. Subsequent OBR segments should increment the Set ID field.
Placer Order Number	OBR-2	EI	22	RE	The order number of the entity that placed the order. If OBR-2 (Placer Order Number) is populated then this field must contain the same value as ORC-2.
Order Number	OBR-2.1	ST	199	R	The placer order number is expected to be unique within the placer's organization. If order numbers are ever reused, a date stamp may need to be added to the end of the number to guarantee uniqueness.
Assigning Authority Name	OBR-2.2	IS	20	RE	The name of the assigning authority that assigned the placer order number.
Assigning Authority ID	OBR-2.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	OBR-2.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-2.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Filler Order Number	OBR-3	EI	22	R	The order number of the entity that carries out the order. This field should contain the same value as ORC-3.
Order Number	OBR-3.1	ST	199	R	The filler order number is expected to be unique within the filler's organization. If order numbers are ever reused, a date stamp may need to be added to the end of the number to guarantee uniqueness.
Assigning Authority Name	OBR-3.2	IS	20	RE	The name of the assigning authority that assigned the filler order number.

Assigning Authority ID	OBR-3.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	OBR-3.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBR-3.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Universal Service ID	OBR-4	CWE	22	R	This field contains a unique identifier for the requested observation/test. For lab orders in general, LOINC *should* be used as the standard coding system in OBR-4.1 to OBR-4.3, if an appropriate LOINC code exists. A local code and local test name may also be sent in OBR-4.4 to OBR-4.6. When a valid LOINC does not exist, the local code may be the only code sent.
Code (LOINC)	OBR-4.1	ST	20	RE	Expecting a LOINC code for the ordered observation/test, if an appropriate LOINC code exists.
Description (LOINC)	OBR-4.2	ST	199	RE	Expecting the text description for the LOINC code in OBR-4.1.
ID Type (LOINC)	OBR-4.3	ST	12	RE	Expecting "LN".
Code (Local)	OBR-4.4	ST	20	RE	Alternate local code the laboratory uses to uniquely identify the ordered observation/ test.
Description (Local)	OBR-4.5	ST	199	RE	The text description for the local code in OBR-4.4.
ID Type (Local)	OBR-4.6	ST	12	RE	Identifies the type of code in OBX-4.4. For local code sets, expecting "L" *OR* "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	OBR-4.7	ST	10	RE	Version of the LOINC coding system used in OBR-4.1.
Alternate Coding System Version ID	OBR-4.8	ST	10	RE	Version of the laboratory's internal coding system used in OBR-4.4.
Observation Start Date/Time	OBR-7	TS	26	R	For specimen-based observations, the start date/time of specimen collection. This field must contain the same value as OBX-14 and SPM-17.1. Format: *YYYYMMDD[HHMM[SS]]*
Observation End Date/Time	OBR-8	TS	26	CE	For specimen-based observations (when the specimen was collected over a period of time) the end date/time of specimen collection. This field must contain the same value as SPM-17.2. Format: *YYYYMMDD[HHMM[SS]]*

Relevant Clinical Information	OBR-13	ST	300	RE	This field contains additional clinical information about the patient or specimen. This field is used to report the suspected diagnosis and clinical findings on requests for interpreted diagnostic studies. VDH generally does not expect to receive information in this field. If there is important clinical information, please send it in an NTE segment.
Ordering Provider	OBR-16	XCN	250	RE	This field identifies the provider who ordered the test. If ORC-12 is populated, this field will contain the same values.
ID number	OBR-16.1	ST	Not Limited	RE	The ordering provider's ID number. The National Provider Identifier (NPI) is recommended.
Last Name	OBR-16.2	FN	Not Limited	RE	The ordering provider's family/surname.
First Name	OBR-16.3	ST	Not Limited	RE	The ordering provider's given name.
Middle Name/Initials	OBR-16.4	ST	Not Limited	RE	The ordering provider's middle initial or middle name.
Suffix	OBR-16.5	ST	Not Limited	RE	The ordering provider's suffix (e.g., JR or III).
Prefix	OBR-16.6	ST	Not Limited	RE	The ordering provider's prefix (e.g., DR).
Assigning Authority	OBR-16.9	HD	227	CE	Identifies the system, application, or organization that assigned the ordering provider ID in OBR-16.1.
Assigning Authority Name	OBR-16.9.1	IS	20	RE	Expecting "CMS" if an NPI is used in OBR-16.1. If another type of identifier is used in OBR-16.1, expecting the name of the assigning authority for this identifier.
Assigning Authority ID	OBR-16.9.2	ST	199	R	Expecting the CMS OID "2.16.840.1.113883.19.4.6" if an NPI is used in OBR-16.1. If another identifier is used in OBR-16.1, expecting the CLIA number, NPI, OID, or other ID for the assigning authority.
Assigning Authority ID Type	OBR-16.9.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBR-16.9.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Name Type Code	OBR-16.10	ID	Not Limited	RE	Defines the type of name in OBR-16. Use of legal name ("L") is expected by VDH. If blank, legal name is assumed. See Table HL70200 – Name Type for other valid values.
Identifier Type Code	OBR-16.13	IS	Not Limited	CE	Component identifies the type of ID in OBR-16.1. Expecting "NPI" (if an NPI is used in OBR-16.1). See Table HL70203 – Identifier Type Code for other valid values.

Assigning Facility	OBR-16.14	HD	227	RE	Identifies the facility that assigned the ordering provider ID in OBR-16.1. Note that if an NPI is used in OBR-16.1, there is no assigning facility and this field will be empty.
Assigning Facility Name	OBR-16.14.1	IS	20	RE	The name of the facility that assigned the ordering provider ID. This field will be empty if an NPI is used in OBR-16.1.
Assigning Facility ID	OBR-16.14.2	ST	199	R	The CLIA number, NPI, OID, or other ID for the assigning facility. This field will be empty if an NPI is used in OBR-16.1.
Assigning Facility ID Type	OBR-16.14.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBR-16.14.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Order Callback Phone Number	OBR-17	XTN	250	RE	The ordering facility's phone number. This field should contain the same value as ORC-23. Although this field is classified as "RE" it is important for public health follow-up and the information should be provided, if possible.
Telecom Use Code	OBR-17.2	ID	Not Limited	RE	Defines the type of phone number in OBR-17. VDH prefers to receive the work number ("WPN"). See Table HL70201 – Telecommunication Use Code for other valid values.
Telecom Equipment Type	OBR-17.3	ID	Not Limited	RE	Defines the type of technology/equipment for the phone number in OBR-17. VDH prefers to receive the telephone ("PH"). See Table HL70202 – Telecommunication Equipment Type for other valid values.
Area Code	OBR-17.6	NM	3	CE	The area code of the ordering facility's telephone number.
Phone Number	OBR-17.7	NM	7	CE	The ordering facility's local telephone number.
Extension	OBR-17.8	NM	Not Limited	CE	The ordering facility's telephone extension.
Results Rpt/Status Change - Date/Time	OBR-22	TS	26	R	This field specifies the date/time the results were reported or status changed. Format: YYYYMMDD[HHMM[SS]]
Result Status	OBR-25	ID	1	R	This field contains the status of the results for the order. Valid values include (excerpt of Table HL70123):

For the Result Status (OBR-25) row, the description cell contains the following sub-table:

Value	Description
A	Some, but not all, results available.
C	Correction to results
F	Final results; results stored and verified. Can only be changed with a corrected result.

Parent Result	OBR-26	PRL	400	CE	This field is only needed when a test must be linked to a "parent" test result. Together with OBR-29 (Parent), this field allows this result to be linked to a specific OBX segment associated with another OBR segment.
OBX-3 Observation Identifier	OBR-26.1	CE	483	R	Must be the value from the parent OBX-3.
OBX-4 Sub-ID	OBR-26.2	ST	20	RE	Must be the value from the parent OBX-4.
OBX-5 Observation Value	OBR-26.3	TX	250	RE	Must be the value from the parent OBX-5.2 or OBX-5.5 or OBX-5.9 (in this priority order).
Parent	OBR-29	EIP	200	CE	Only needed if you reference a parent result. Commonly used with microbiology messages to link a susceptibility result with the parent culture that identified the organism.
Placer Order Number	OBR-29.1	EI	427	RE	The order number of the entity that placed the order. If OBR-2 (Placer Order Number) is populated then this field must contain the same value.
Order Number	OBR-29.1.1	ST	199	R	The placer order number from the parent OBR-2.
Assigning Authority Name	OBR-29.1.2	IS	20	RE	The name of the assigning authority that assigned the placer order number.
Assigning Authority ID	OBR-29.1.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	OBR-29.1.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBR-29.1.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Filler Order Number	OBR-29.2	EI	427	R	The order number of the entity that carries out the order. This field should contain the same value as OBR-3.
Order Number	OBR-29.2.1	ST	199	R	The filler order number from the parent OBR-3.
Assigning Authority Name	OBR-29.2.2	IS	20	RE	The name of the assigning authority that assigned the filler order number.
Assigning Authority ID	OBR-29.2.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	OBR-29.2.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBR-29.2.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.

Field Name	Seq	DT	Length	Use	Notes/Value Set
OBSERVATION/RESULT SEGMENT (OBX)					
For laboratory testing, the observation/result (OBX) segment normally reports the results of a test performed on a specimen. Each OBX segment contains information regarding a single observation result including the test type, result, and time.					
Set ID - OBX	OBX-1	SI	4	R	For the first OBX segment, under an OBR, the Set ID shall be "1", for a second OBX segment under the same OBR, the Set ID shall be "2", etc. Subsequent OBX segments should increment the Set ID field.
Value Type	OBX-2	ID	3	RE	This field identifies the data type used in OBX-5. VDH requires the use of Coded with Exceptions ("CWE") or Structured Numeric ("SN") data types. See Table HL70125 – Value Type for reference.
Observation Identifier	OBX-3	CWE		R	This field contains a unique identifier for the observation/result. For observations in general, LOINC *must* be used as the standard coding system in OBX-3.1 to OBX-3.3. A local code and local observation name may also be sent in OBX-3.4 to OBX-3.6. When a valid LOINC does not exist, the local code may be the only code sent.
Code (LOINC)	OBX-3.1	ST	20	R	Expecting a LOINC code for the observation/result, if an appropriate LOINC code exists.
Description (LOINC)	OBX-3.2	ST	199	RE	Expecting the standardized text description for the LOINC code in OBX-3.1.
ID Type (LOINC)	OBX-3.3	ST	12	R	Literal value: "LN", if OBX-3.1 and OBX-3.2 are populated.
Code (Local)	OBX-3.4	ST	20	RE	Alternate local code the laboratory uses to uniquely identify the observation/result.
Description (Local)	OBX-3.5	ST	199	CE	The text description for the local code in OBX-3.4.
ID Type (Local)	OBX-3.6	ST	12	CE	Identifies the type of code in OBX-3.4. For local code sets, expecting "L" *OR* "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	OBX-3.7	ST	10	RE	Version of the LOINC coding system used in OBX-3.1.
Alternate Coding System Version ID	OBX-3.8	ST	10	RE	Version of the laboratory's internal coding system used in OBX-3.4.
Observation Sub-ID	OBX-4	ST	20	CE	This field is used to distinguish between multiple OBX segments (under the same parent OBR) with the same observation ID (OBX-3).

Observation Value	OBX-5	Varies	99999	RE	This field contains the results of the observation/test in OBX-3. The structure of OBX-5 is defined by OBX-2. If findings are quantitative or other numeric values, they should be presented as Structured Numeric (SN) data type. If findings are qualitative or other coded results, they should be presented as Coded with Exceptions (CWE) data type using SNOMED-CT.
CWE format for OBX-5 (5.1 to 5.9)					*CWE data type* – used to carry coded results including: • Organisms – *|17872004^Neisseria meningitidis^SCT|* • Modifiers – *|260373001^Detected^SCT|*
Identifier (SNOMED)	OBX-5.1	ST	20	R	Expecting a SNOMED-CT code identifying the observation/result.
Text (SNOMED)	OBX-5.2	ST	199	R	Expecting a text description for the SNOMED-CT code in OBX-5.1.
Name of Coding System(SNOMED)	OBX-5.3	ID	12	R	Identifies the type of code in OBX-5.1. Literal value: "SCT", if OBX-5.1 and OBX-5.2 are populated.
Alternate Identifier (Local)	OBX-5.4	ST	20	RE	Alternate local code the laboratory uses to uniquely identify the result.
Alternate Text (Local)	OBX-5.5	ST	199	CE	The text description for the local code in OBX-5.4.
Name of Alternate Coding System (Local)	OBX-5.6	ID	12	CE	Identifies the type of code in OBX-5.4. For local code sets, expecting "L" *OR* "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	OBX-5.7	ST	10	RE	Version of the SNOMED-CT coding system used in OBX-5.1.
Alternate Coding System Version ID	OBX-5.8	ST	10	RE	Version of the laboratory's internal coding system used in OBX-5.4
Original Text	OBX-5.9	ST	199	RE	Expecting a text description of the result. If a valid SNOMED-CT code and alternate identifier are not present, then this component is required.
SN format for OBX-5 (5.1 to 5.4)					*SN data type* – used to carry numeric result values including: • Intervals: – |^0^-^1| (between 0 and 1) • Ratios – |^1^/^2| or |^1^:^2| (ratio of 1 to 2) • Inequalities – |<^10| (less than 10) • Categorical – |2^+|
Comparator	OBX-5.1	ST	2	RE	Must be one of ">" or "<" or ">=" or "<=" or "=" or "<>". This component defaults to "=" if empty.
Num1	OBX-5.2	NM		RE	Expecting a numeric value.

Separator/Suffix	OBX-5.3	ST	1	RE	Must be one of "-" or "+" or "/" or "." or ":".
Num2	OBX-5.4	NM		RE	Expecting a numeric value.
Units	OBX-6	CWE	250	CE	This field contains the units of measure for numeric values in OBX-5. If OBX-2 = "SN" then this field is required.
Identifier	OBX-6.1	ST	20	RE	Expecting a Unified Code for Units of Measure (UCUM). Visit HL7 for commonly used UCUM codes.
Text	OBX-6.2	ST	199	CE	Expecting the standardized text description for the UCUM code in OBX-6.1.
Name of Coding System	OBX-6.3	ID	20	CE	Identifies the type of code in OBX-6.1. Literal value: "UCUM", if OBX-6.1 and OBX-6.2 are populated.
Alternate Identifier	OBX-6.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the unit of measure.
Alternate Text	OBX-6.5	ST	199	CE	Expecting a text description for the local code in OBX-6.4.
Name of Alternate Coding System	OBX-6.6	ID	20	CE	Identifies the type of code in OBX-6.4. For local code sets, expecting "L" *OR* "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	OBX-6.7			RE	Version of the UCUM coding system used in OBX-6.1.
Alternate Coding System Version ID	OBX-6.8			RE	Version of the laboratory's internal coding system used in OBX-6.4.
Reference Range	OBX-7	ST	60	RE	Interpretation range that applies to the value reported in OBX-5. It should provide enough information to understand the abnormal flags reported in OBX-8.
Abnormal Flags	OBX-8	CWE	20	CE	Indicates whether the result in OBX-5 is abnormal.
Identifier	OBX-8.1			RE	Indicates the type of abnormal result. See Table HL70078 – Abnormal Flags for valid values. Valid values include (excerpt of Table HL70078): **Value** / **Description** A / Abnormal H / Above high normal L / Below low normal LL / Below lower panic limits
Text	OBX-8.2			CE	Expecting the standardized text description that corresponds with the code in OBX-8.1.

Name of Coding System	OBX-8.3			CE	Identifies the type of code in OBX-8.1. Literal value: "HL70078", if OBX-8.1 and OBX-8.2 are populated.
Alternate Identifier	OBX-8.4			RE	An alternate code the laboratory uses to uniquely identify the abnormal flag.
Alternate Text	OBX-8.5			CE	The text description that corresponds with the local code in OBX-8.4.
Name of Alternate Coding System	OBX-8.6			CE	Identifies the type of code in OBX-8.4. For local code sets, expecting "L" *OR* "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	OBX-8.7			RE	Version of the HL70078 coding system used in OBX-8.1.
Alternate Coding System Version ID	OBX-8.8			RE	Version of the laboratory's internal coding system used in OBX-8.4.
Observation Result Status	OBX-11	ID	1	R	This field contains the status of the result for the observation. Valid values include (excerpt of Table HL70085): | Value	Description
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C	Record coming over is a correction and thus replaces a final result
F	Final results; Can only be changed with a corrected result
P	Preliminary results
S	Partial results
W	Post original as wrong	
Date/Time of the Observation	OBX-14	TS	26	O	The clinically relevant date/time of the observation. For specimen-based laboratory reporting, provide the specimen collection date and time. This field must contain the same value as OBR-7 and SPM-17.1. Format: *YYYYMMDD[HHMM[SS]]*
Observation Method	OBX-17	CWE	250	RE	Method of testing by the laboratory. If the LOINC code in OBX-3 does not indicate the test method, this field shall be populated.
Identifier	OBX-17.1	ST	20	RE	Expecting a lab test method code from PHVS LabTestMethods_CDC – Observation Methods.
Text	OBX-17.2	ST	199	CE	The standardized text description that corresponds with the lab test method code in OBX-17.1.
Name of Coding System	OBX-17.3	ID	20	CE	Identifies the type of code in OBX-17.1. Literal value: "CDCPHVS", if OBX-17.1 and OBX-17.2 are populated.
Alternate Identifier	OBX-17.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the observation method.

Alternate Text	OBX-17.5	ST	199	CE	The text description that corresponds with the local code in OBX-17.4.
Name of Alternate Coding System	OBX-17.6	ID	20	CE	Identifies the type of code in OBX-17.4. For local code sets, expecting "L" *OR* "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	OBX-17.7			RE	Version of the PHVS_LabTestMethods_CDC – Observation Methods coding system used in OBX-17.1.
Alternate Coding System Version ID	OBX-17.8			RE	Version of the laboratory's internal coding system used in OBX-17.4.
Date/Time of the Analysis	OBX-19	TS	26	RE	Date and time when the specimen testing was performed. Format: *YYYYMMDD[HHMM[SS]]*
Performing Organization Name	OBX-23	XON	567	R	This field identifies the laboratory that produced the test result described in this OBX segment.
Organization Name	OBX-23.1	ST	50	CE	The name of the laboratory that produced the test result. Please discuss format of name and any abbreviations with VDH.
Organization Name Type	OBX-23.2	IS	20	RE	Defines the type of name in OBX-23.1. Use of legal name ("L") is expected by VDH. If blank, legal name is assumed. See Table HL70204 – Organizational Name Type for other valid values.
Assigning Authority	OBX-23.6	HD	227	CE	Identifies the system, application, or organization that assigned the performing laboratory ID in OBX-23.10.
Assigning Authority Name	OBX-23.6.1	IS	20	RE	The name of the assigning authority that assigned the performing laboratory ID in OBX-23.10. "CLIA" is expected.
Assigning Authority ID	OBX-23.6.2	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority. If a CLIA number is used in OBX-23.10, "2.16.840.1.113883.4.7" is expected.
Assigning Authority ID Type	OBX-23.6.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBX-23.6.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Identifier Type Code	OBX-23.7	ID	Not Limited	CE	Literal value: "XX", if OBX-23.10 is populated.
Organization Identifier	OBX-23.10	ST	Not Limited	RE	The performing laboratory identifier. The CLIA number is expected.
Performing Organization Address	OBX-24	XAD	106	R	This field identifies the performing laboratory address.
Street Address Line 1	OBX-24.1	ST	100	RE	The performing laboratory's street/mailing address (e.g., "123 Main St.").

Street Address Line 2	OBX-24.2	ST	100	RE	Use for further street address information.
City	OBX-24.3	ST	50	RE	The city in which the performing laboratory is located.
State	OBX-24.4	ST	50	RE	The state in which the performing laboratory is located. Use a valid 2 character state code.
ZIP or Postal Code	OBX-24.5	ST	12	RE	The zip code of the performing laboratory's address. Use a valid 5-digit zip code.
Address Type	OBX-24.7	ID	3	RE	Defines the type of address in OBX-24. Type code "B" (Business) from Table HL70190 – Address Type is expected. If performing laboratory address is submitted, this field is required.
County Code	OBX-24.9	IS	20	RE	Submit the FIPS code for the performing laboratory address. If address is in an independent city in Virginia, submit the city FIPS code. Use the two digit VA state code ("51") followed by the three digit county/city-specific code.
Performing Organization Medical Director	OBX-25	XCN	3002	RE	This field identifies the performing laboratory's medical director.
ID number	OBX-25.1	ST	Not Limited	RE	The medical director's ID number. The National Provider Identifier (NPI) is recommended.
Last Name	OBX-25.2	FN	Not Limited	RE	The medical director's family/surname.
First Name	OBX-25.3	ST	Not Limited	RE	The medical director's given name.
Middle Name/Initials	OBX-25.4	ST	Not Limited	RE	The medical director's middle initial or middle name.
Suffix	OBX-25.5	ST	Not Limited	RE	The medical director's suffix (e.g., JR or III).
Prefix	OBX-25.6	ST	Not Limited	RE	The medical director's prefix (e.g., DR).
Assigning Authority	OBX-25.9	HD	227	CE	Identifies the system, application, or organization that assigned the medical director ID in OBX-25.1.
Assigning Authority Name	OBX-25.9.1	IS	20	RE	Expecting "CMS" if an NPI is used in OBX-25.1. If another type of identifier is used in OBX-25.1, expecting the name of the assigning authority for this identifier.

Assigning Authority ID	OBX-25.9.2	ST	199	R	Expecting the CMS OID "2.16.840.1.113883.19.4.6" if an NPI is used in OBX-25.1. If another identifier is used in OBX-25.1, expecting the CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	OBX-25.9.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBX-25.9.2, "NPI", if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Name Type Code	OBX-25.10	ID	Not Limited	RE	Defines the type of name in OBX-25. Use of legal name ("L") is expected by VDH. If blank, legal name is assumed. See Table HL70200 – Name Type for other valid values.
Identifier Type Code	OBX-25.13	IS	Not Limited	CE	Component identifies the type of ID in OBX-25.1. Expecting "NPI" (if an NPI is used in OBX-25.1). See Table HL70203 – Identifier Type Code for other valid values.
Assigning Facility	OBX-25.14	HD	227	RE	Identifies the facility that assigned the medical director ID in OBX-25.1. Note that if an NPI is used in OBX-25.1, there is no assigning facility and this field will be empty.
Assigning Facility Name	OBX-25.14.1	IS	20	RE	The name of the facility that assigned the medical director ID. This field will be empty if an NPI is used in OBX-25.1.
Assigning Facility ID	OBX-25.14.2	ST	199	R	The CLIA number, NPI, OID, or other ID for the assigning facility. This field will be empty if an NPI is used in OBX-25.1.
Assigning Facility ID Type	OBX-25.14.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBX-25.14.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.

OBX NTE					
The NTE segment is a common format for sending notes and comments. This optional, repeating segment may be inserted after any of the OBX segments. The NTE segment applies to the information in the segment that immediately precedes it.					
Field Name	**Seq**	**DT**	**Length**	**Use**	**Notes/Value Set**
Set ID – NTE	NTE-1	SI	4	R	For the first NTE segment, the Set ID shall be "1", for a second NTE segment, the Set ID shall be "2", etc. Subsequent NTE segments under the same parent segment should increment the Set ID field.
Source of Comment	NTE-2	ID	8	RE	Expecting value "P" if orderer/placer is source of comment or "L" if lab/filler department is source of comment. Values are from Table HL70105 – Source of Comment.
Comment	NTE-3	FT	65536	R	Please include any relevant comments pertaining to the test results in the preceding OBX segment.

Comment Type	NTE-4	CE	60	RE	This field contains a value to identify the type of comment in NTE-3. Please see Table HL70364 – Comment Type for valid values.

SPECIMEN SEGMENT (SPM)					
The Specimen (SPM) segment contains information regarding the type of specimen, where and how it was collected, who collected it, and some basic characteristics of the specimen.					
Field Name	**Seq**	**DT**	**Length**	**Use**	**Notes/Value Set**
Set ID – SPM	SPM-1	SI	4	R	For the first SPM segment, the Set ID shall be "1", for a second SPM segment, the Set ID shall be "2", etc. Subsequent SPM segments should increment the Set ID field.
Specimen ID	SPM-2	EIP	80	R	A unique identifier for the specimen. Generally, the accession number is the specimen ID.
Filler Assigned Specimen ID	SPM-2.2	EI	427	R	A unique laboratory assigned specimen identifier.
Specimen Identifier	SPM-2.2.1	ST	199	R	The specimen identifier. The identifier should be unique within the laboratory. If specimen identifiers are ever reused, a date stamp may need to be added to the end of the identifier to guarantee uniqueness.
Assigning Facility Name	SPM-2.2.2	IS	20	RE	The name of the facility that assigned the specimen ID.
Assigning Facility ID	SPM-2.2.3	ST	199	R	The CLIA number, NPI, OID, or other ID for the assigning facility.
Assigning Facility ID Type	SPM-2.2.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in SPM-2.2.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Specimen Type	SPM-4	CWE	250	R	Identifies the source of the specimen.
Identifier	SPM-4.1	ST	20	RE	Expecting a unique identifier for the specimen. Please use SNOMED-CT specimen codes or identifiers from Table HL70487 – Specimen Type.
Description	SPM-4.2	ST	199	CE	Expecting the standardized text description for the specimen identifier in SPM-4.1.
Name of Coding System	SPM-4.3	ID	20	CE	Identifies the type of code in SPM-4.1. Expecting "SCT", if a SNOMED-CT specimen code is used or "HL70487", if a specimen code from Table HL70487 is used.
Alternate Identifier	SPM-4.4	ST	20	RE	Alternate code the laboratory uses to uniquely identify the specimen.
Alternate Text	SPM-4.5	ST	199	CE	The text description for the code in SPM-4.4.

Name of Alternate Coding System	SPM-4.6	ID	20	CE	Identifies the type of code in SPM-4.4. If a specimen code from Table HL70070 – Specimen Source is used in SPM-4.4, expecting "HL70070". For local code sets, expecting "L" *OR* "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	SPM-4.7	ST	10	RE	Version of the coding system used in SPM-4.1.
Alternate Coding System Version ID	SPM-4.8	ST	10	RE	Version of the laboratory's internal coding system used in SPM-4.4.
Specimen Type Modifier	SPM-5	CWE	250	RE	Together with SPM-4 (Specimen Type), this field allows for further identification of the specimen.
Identifier	SPM-5.1	ST	20	RE	Expecting a code for the specimen type modifier. Please see PHVS_ModifierOrQualifier_CDC – Modifier or Qualifier for valid values.
Description	SPM-5.2	ST	199	CE	Expecting the standardized text description for the code in SPM-5.1.
Name of Coding System	SPM-5.3	ID	20	CE	Identifies the type of code in SPM-5.1. Literal value: "SCT", if SPM-5.1 and SPM-5.2 are populated.
Alternate Identifier	SPM-5.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the specimen type modifier.
Alternate Text	SPM-5.5	ST	199	CE	Expecting a text description for the local code in SPM-5.4.
Coding System Version ID	SPM-5.7	ST	10	RE	Version of the SNOMED-CT coding system used in SPM-5.1.
Alternate Coding System Version ID	SPM-5.8	ST	10	RE	Version of the laboratory's internal coding system used in SPM-5.4.
Specimen Additives	SPM-6	CWE	250	RE	Information regarding any substances added to the specimen before or at the time of specimen collection.
Identifier	SPM-6.1	ST	20	RE	Expecting a code for the specimen additive. Please see Table HL70371 – Specimen Additives for valid values.
Description	SPM-6.2	ST	199	CE	Expecting the standardized text description for the code in SPM-6.1.
Name of Coding System	SPM-6.3	ID	20	CE	Identifies the type of code in SPM-6.1. Literal value: "HL70371", if SPM-6.1 and SPM-6.2 are populated.
Alternate Identifier	SPM-6.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the specimen additive.
Alternate Text	SPM-6.5	ST	199	CE	Expecting a text description for the local code in SPM-6.4.

Name of Alternate Coding System	SPM-6.6	ID	20	CE	Identifies the type of code in SPM-6.4. For local code sets, expecting "L" *OR* "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	SPM-6.7	ST	10	RE	Version of the coding system used in SPM-6.1.
Alternate Coding System Version ID	SPM-6.8	ST	10	RE	Version of the laboratory's internal coding system used in SPM-6.4.
Specimen Collection Method	SPM-7	CWE	250	RE	Identifies the method used to collect the specimen.
Identifier	SPM-7.1	ST	20	RE	Expecting a code for the specimen collection method. Use SNOMED-CT specimen codes or values from Table HL70488 – Specimen Collection Method.
Description	SPM-7.2	ST	199	CE	Expecting the standardized text description for the code in SPM-7.1.
Name of Coding System	SPM-7.3	ID	20	CE	Identifies the type of code in SPM-7.1. Expecting "SCT" if a SNOMED-CT specimen code is used in SPM-7.1 and SPM-7.2 or "HL70488" if a specimen code from Table HL70488 is used.
Alternate Identifier	SPM-7.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the specimen collection method.
Alternate Text	SPM-7.5	ST	199	CE	Expecting a text description for the local code in SPM-7.4.
Name of Alternate Coding System	SPM-7.6	ID	20	CE	Identifies the type of code in SPM-7.4. For local code sets, expecting "L" *OR* "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	SPM-7.7	ST	10	RE	Version of the coding system used in SPM-7.1.
Alternate Coding System Version ID	SPM-7.8	ST	10	RE	Version of the laboratory's internal coding system used in SPM-7.4.
Specimen Source Site	SPM-8	CWE	250	RE	Identifies the source from which the specimen was obtained. For biological samples, the source may be the anatomical site where the specimen was collected.
Identifier	SPM-8.1	ST	20	RE	Expecting a code for the specimen source site. Please see PHVS_BodySite_HITSP – Body Site for valid values.
Description	SPM-8.2	ST	199	CE	Expecting the standardized text description for the code in SPM-8.1.
Name of Coding System	SPM-8.3	ID	20	CE	Identifies the type of code in SPM-8.1. Literal value: "SCT", if SPM-8.1 and SPM-8.2 are populated.

Alternate Identifier	SPM-8.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the specimen source site.
Alternate Text	SPM-8.5	ST	199	CE	Expecting a text description for the local code in SPM-8.4.
Name of Alternate Coding System	SPM-8.6	ID	20	CE	Identifies the type of code in SPM-8.4. For local code sets, expecting "L" *OR* "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	SPM-8.7	ST	10	RE	Version of the coding system used in SPM-8.1.
Alternate Coding System Version ID	SPM-8.8	ST	10	RE	Version of the laboratory's internal coding system used in SPM-8.4.
Specimen Source Site Modifier	SPM-9	CWE	250	RE	Together with SPM-8 (Specimen Source Site), this field allows for further identification of the source from which the specimen was obtained.
Identifier	SPM-9.1	ST	20	RE	Expecting a code for the specimen source site modifier. Please see PHVS_ModifierOrQualifier_CDC – Modifier or Qualifier for valid values.
Description	SPM-9.2	ST	199	CE	Expecting the standardized text description for the code in SPM-9.1.
Name of Coding System	SPM-9.3	ID	20	CE	Identifies the type of code in SPM-9.1. Literal value: "SCT", if SPM-9.1 and SPM-9.2 are populated.
Alternate Identifier	SPM-9.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the specimen source site modifier.
Alternate Text	SPM-9.5	ST	199	CE	Expecting a text description for the local code in SPM-9.4.
Name of Alternate Coding System	SPM-9.6	ID	20	CE	Identifies the type of code in SPM-9.4. For local code sets, expecting "L" *OR* "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	SPM-9.7	ST	10	RE	Version of the coding system used in SPM-9.1.
Alternate Coding System Version ID	SPM-9.8	ST	10	RE	Version of the laboratory's internal coding system used in SPM-9.4.
Specimen Collection Site	SPM-10	CWE	250	O	This optional field differs from SPM-8 (Specimen Source Site) in that it identifies the point of entry into the source site for specimen collection.
Specimen Collection Amount	SPM-12	CQ	20	RE	Identifies the amount of specimen collected. This can be reported as a volume or a weight/mass.
Quantity	SPM-12.1	NM	16	R	This field contains the quantity of the specimen collected.
Units	SPM-12.2	CE	183	RE	This field contains the units of measure for the amount of specimen collected.

Specimen Description	SPM-14	ST	250	O	This field contains additional information about the specimen.
Specimen Collection Date/Time	SPM-17	DR	26	R	Identifies the date and time range over which the sample was collected.
Range Start Date/Time	SPM-17.1	TS	26	RE	The date and time when specimen collection started. This value should match OBR-7 (Observation Start Time) and OBX-14 (Date/Time of the Observation). Format: *YYYYMMDD[HHMM[SS]]*
Range End Date/Time	SPM-17.2	TS	26	RE	The date and time when specimen collection stopped. This value should match OBR-8 (Observation End Date/Time). Format: *YYYYMMDD[HHMM[SS]]*
Specimen Received Date/Time	SPM-18	TS	26	R	Identifies the date and time when the specimen was received at the diagnostic service. Format: *YYYYMMDD[HHMM[SS]]*

Value Sets

The value sets used in the ELR message are listed below, with links to allow you to access the full value sets. Most value sets associated with ELR 2.5.1 messaging are available from the PHIN VADS site at https://phinvads.cdc.gov/vads/SearchVocab.action. PHIN VADS is a web-based enterprise vocabulary system for accessing, searching, and distributing vocabularies used in public health and clinical care practice.

Commonly Used UCUM Codes for Healthcare Units
PHVS LabTestMethods_CDC – Observation Methods
PHVS_ModifierOrQualifier_CDC – Modifier or Qualifier
PHVS_BodySite_HITSP – Body Site
Table HL70001 – Administrative Sex
Table HL70002 – Marital Status
Table HL70004 – Patient Class
Table HL70005 – Race
Table HL70063 – Relationship
Table HL70070 – Specimen Source
Table HL70078 – Abnormal Flags
Table HL70085 – Observation Result Status
Table HL70105 – Source of Comment
Table HL70123 – Result Status
Table HL70125 – Value Type
Table HL70155 – Acknowledgement Type
Table HL70189 – Ethnic Group
Table HL70190 – Address Type
Table HL70200 – Name Type
Table HL70201 – Telecommunication Use Code
Table HL70202 – Telecommunication Equipment Type
Table HL70203 – Identifier Type Code
Table HL70204 – Organizational Name Type
Table HL70364 – Comment Type
Table HL70371 – Specimen Additives
Table HL70487 – Specimen Type
Table HL70488 – Specimen Collection Method